

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claims 1-27 (Canceled).

Claim 28 (New): Field-effect microelectronic device, including:

a substrate; and

at least one structure forming one or more channels capable of connecting, in the direction of their lengths, one or more sources and one or more drains, which structure is formed by a stack, in a direction orthogonal to a main plane of the substrate, of at least two bars having different widths thereby producing a notched side profile of the stack, said stack including an alternation of conducting bars and bars that based on an insulating material.

Claim 29 (New): Microelectronic device according to claim 28, the stack including at least two successive bars of which one is based on Si and the other is based on SiO₂.

Claim 30 (New): Microelectronic device according to claim 28, at least one of the bars being at least partially surrounded with insulating caps, in a direction parallel to a main plane of the substrate.

Claim 31 (New): Microelectric device according to claim 28, said structure including at least two bars having different lengths and/or different thicknesses.

Claim 32 (New): Field-effect microelectronic device according to claim 28, further comprising:

a gate at least partially covering said structure and one or more sources connected by said structure to one or more drains.

Claim 33 (New): Field-effect microelectronic device, including:

a substrate; and

at least one structure forming one or more channels capable of connecting, in the direction of their lengths, one or more sources and one or more drains, which structure is formed by a stack, in a direction orthogonal to a main plane of the substrate, of at least two bars having different widths thereby producing a notched side profile of the stack, some of the bars being at least partially surrounded with insulating caps, in a direction parallel to a main plane of the substrate, said caps being situated between said the some of said bars and at least one gate dielectric layer.

Claim 34 (New): Microelectronic device according to claim 33, the stack including at least two successive bars based on different materials.

Claim 35 (New): Microelectronic device according to claim 34, the stack including only semi-conducting bars.

Claim 36 (New): Microelectronic device according to claim 34, the stack including an alternation of bars 30 semi-conducting bars and insulating bars.

Claim 37 (New): Microelectronic device according to claim 34, the stack including at least two successive bars based on different semi-conducting materials and/or having different dopings.

Claim 38 (New): Microelectronic device according to claim 34, said structure including at least two bars having different lengths and/or different thicknesses.

Claim 39 (New): Field-effect microelectronic device according to claim 34, further comprising:

a gate at least partially covering said structure and one or more sources connected by said structure to one or more drains.

Claim 40 (New): Method for producing a field-effect microelectronic device equipped with at least one structure comprising at least two stacked bars, of different widths, capable of forming one or more transistor channels, said method including the steps of:

forming, on a substrate, a stack of a plurality of layers comprising at least two successive layers based on different materials, said stack including an alternation of semi-conducting bars and insulating bars;

forming at least one mask on said stack;

anisotropic etching of the layers through the mask; and

partial and selective etching of one or more layers of the stack.

Claim 41 (New): Method according to claim 40, further including: the conformal deposition of a dielectric layer on said structure.

Claim 42 (New): Method according claim 40, further including:

partial isotropic etching of said dielectric layer so as to form insulating caps around some of the bars of said structure.

Claim 43 (New): Method according claim 40, further including: the formation of a gate at least partially covering said structure and optionally the hard mask.

Claim 44 (New): Method according to claim 40, wherein the formation of the gate comprises the steps of:

- covering the structure with an insulating layer;
- forming at least one opening in the insulating layer so as to expose said structure;
- covering the structure with a gate insulating layer; and
- filling the opening with a gate material.

Claim 45 (New): Method according to claim 44, including, prior to the formation of the gate one or more steps in which said structure is doped.

Claim 46 (New): Method for producing a field-effect microelectronic device equipped with at least one structure comprising at least two stacked bars, of different widths, capable of forming one or more transistor channels, the method including the steps of:

- forming, on a substrate, a stack of a plurality of layers comprising at least two successive layers based on different materials;
- forming at least one mask on said stack;
- anisotropic etching of the layers through the mask;
- partial and selective etching of one or more layers of the stack;
- conformal depositing of a dielectric layer on said structure; and
- partial isotropic etching of said dielectric layer, so as to form insulating caps around some of the bars of said structure.

Claim 47 (New): Method according claim 46, also including: the formation of a gate at least partially covering said structure and optionally the hard mask.

Claim 48 (New): Method according to claim 47, wherein the formation of the gate comprises the steps of:

covering the structure with an insulating layer;
forming at least one opening in the insulating layer so as to expose said structure;
covering the structure with a gate insulating layer; and
filling the opening with a gate material.

Claim 49 (New): Method according to claim 48, including, prior to the formation of the gate one or more steps in which said structure is doped.

Claim 50 (New): Device according to claim 28, wherein the notched side profile is either a serrated profile or a crenellated profile.

Claim 51 (New): Device according to claim 33, wherein the notched side profile is either a serrated profile or a crenellated profile.